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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/556,341

04/17/2007

Abraham Kribus

30903

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06/08/2010

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EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT

PAPER NUMBER

3743

MAIL DATE

DELIVERY MODE

06/08/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/556,341	Applicant(s) KRIBUS ET AL.	
	Examiner Stephen M. Gravini	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 70-81 and 83-108 is/are pending in the application.
- 4a) Of the above claim(s) 90-101 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-89 and 102-108 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20100426</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 70-89 and 102-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strass et al. (US 3,427,093) in view of Papadopoulos (WO 2004/088759). The claims are reasonably and broadly construed, in light of the accompanying specification to be disclosed by Strass as comprising: at least one solar radiation concentrator (mirrors in figure 1) having an optical focal point and having an aperture, adapted for focusing incident solar radiation with a single reflection to a single focal point (the “adapted for” language is a statement of intended use and the teachings of Strass meet that adaptation);

at least one power conversion unit **10** which receives said light after being focused; and

at least one solar tracking apparatus comprising at least one rotational drive (column 3 lines 20-35 and column 4 line 45 through column 5 line 27). Strass also discloses the claimed features wherein the system is configured for generating electric power and heat, wherein the system is configured for generating electric power, wherein the system is configured for generating heat, wherein said solar radiation concentrator is shaped as a concave parabolic dish, wherein the solar radiation concentrator is shaped as a dish or a polygon wherein said at least one rotational drive comprises a radio-dial type drive, wherein said radio-dial type drive is configured to have

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substantially zero backlash, wherein said radio-dial type drive is configured to have substantially zero drift, wherein said radio-dial type drive comprises a cable wrapped about a rotational element under a tension sufficient to have substantially zero backlash and substantially zero drift to avoid slack and slippage between the cable and the rotational element, wherein the tracking apparatus comprises two rotational drives rotating around two non-parallel rotation axes, further comprising a controller configured to maximize the radiation flux on the power conversion unit, using at least one of (a) a calculated expression based on geographical and time data, (b) a closed loop correction based on a measurement of at least one of the radiation flux or the generated output power, wherein the solar radiation concentrator is configured to concentrate, wherein the solar radiation concentrator is configured to concentrate, wherein the power conversion unit comprises at least one of a thermal engine and one or more concentrated photovoltaic cell, characterized by a combined conversion efficiency to heat and electricity, wherein the combined conversion efficiency, further comprising a coolant fluid mechanism adapted to heat the coolant fluid by absorbing heat from the power conversion unit, wherein the coolant fluid mechanism is adapted to heat the coolant fluid, wherein plurality of said solar radiation concentrators and plurality of said power conversion units are configured to be installed on a single said solar tracking apparatus, wherein said at least one power conversion unit is positioned substantially at said focal point all of which are inherent because the configuration of Strass meets each of those claimed features. Strass discloses the claimed invention, except for the claimed an aperture of between about 0.5 m and about 2 meters or specific

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temperatures or efficiencies. It would have been an obvious matter of design choice to recite that aperture value, since the teachings of Strass discloses the invention, as claimed, regardless of the aperture value. Strass discloses the claimed invention, as rejected above, except for the feature of at least one solar radiation concentrator configured to achieve at least 200 suns concentrating ratio. Papadopoulos, another solar power, discloses that feature on the face of that reference, particularly in the abstract. It would have been obvious to one skilled in the art to combine the features of Strass, with the teachings of Papadopoulos for the advantage of achieving an optimum use of solar energy through optimum focal point concentrating ratios.

Response to Arguments

Applicant's arguments with respect to claims 70-81, 83-89, and 102-108 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other prior art references cited with this action teach one or more elements of the claimed invention.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Gravini whose telephone number is 571 272 4875. The examiner can normally be reached on normal weekday business hours (east coast time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth B. Rinehart can be reached on 571 272 4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. Gravini/
Primary Examiner, Art Unit 3743